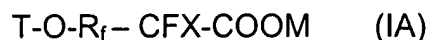


## I. AMENDMENTS TO THE CLAIMS

Claim 1. (Withdrawn) A formulation based on the PTFE, homopolymer or modified, comprising:

- 1) latex of said PTFE having a particle diameter between 5 and 100 nm, comprising an anionic fluorinated surfactant in an amount in the range 2-25% by weight based on the PTFE, preferably 3-20% by weight;
- 2) a non ionic fluorinated surfactant added to the PTFE latex in an amount in the range 18-60% by weight based on the PTFE, preferably 25-45% by weight.

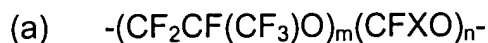
Claim 2. (Withdrawn) A formulation according to claim 1, wherein the anionic fluorinated surfactants are selected from:



wherein: X = F, CF<sub>3</sub>; M=H, NH<sub>4</sub>, Na, Li, K;

T is a C<sub>1</sub>-C<sub>3</sub> (per)fluoroalkyl group, optionally containing one Cl atom; preferably it is selected from -CF<sub>3</sub>, -C<sub>2</sub>F<sub>5</sub>, -C<sub>3</sub>F<sub>7</sub>, -CF<sub>2</sub>Cl, -C<sub>2</sub>F<sub>4</sub>Cl, -C<sub>3</sub>F<sub>6</sub>Cl; optionally one or two F atoms can be replaced by H;

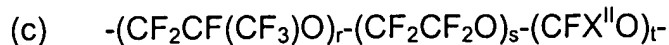
R<sub>f</sub> is a (per)fluoropolyoxyalkylene radical having a number average molecular weight M<sub>n</sub> in the range 200-2,000, preferably 350-1,000; R<sub>f</sub> is selected in particular from the following classes:



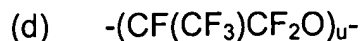
wherein m and n are integers such that the n/m ratio is in the range 0.01 – 0.5 and the molecular weight is in the above range;



wherein p and q are integers such that the q/p ratio is in the range 0.5-2 and the molecular weight is in the above range;



wherein r, s and t are integers such that r+s is in the range 1-50, the t/(r+s) ratio is in the range 0.01-0.05 and the molecular weight is in the above range;



wherein u is an integer such that the molecular weight is in the above range;

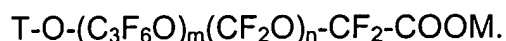
(e)  $-(\text{C}\text{Y}\text{Z}-\text{CF}_2\text{CF}_2\text{O})_v-$

wherein Y and Z, equal to or different from each other, are F, Cl or H; v is a number such that the molecular weight is in the above range;

(f)  $-(\text{CF}_2\text{CF}_2\text{O})_w-$

w is a number such that the molecular weight is in the above range.

Claim 3. (Withdrawn) A formulation according to claim 2, wherein the anionic fluorinated surfactants (IA) are the compounds having  $R_f$  of type (a):



Claim 4. (Withdrawn) A formulation according to claim 1, wherein the compounds of formula (IA) are used in admixture with the following anionic surfactants:



wherein n can range between 4 and 12,



wherein  $\text{M}=\text{H}, \text{NH}_4, \text{Na}, \text{Li}, \text{K}$  and n can range between 2 and 5.

Claim 5. (Withdrawn) A formulation according to claim 1, wherein the non ionic fluorinated surfactants added to the PTFE polymerization latex have the following structures:



wherein:

$R_f$  is selected from the structures (a), (b), (c), (d), (e), (f) of claim 2;

L is a divalent organic group, a linking group between  $R_f$  and  $R_h$ , selected from:  $-\text{CO}-\text{NR}^1-$ ,  $-\text{CH}_2(\text{OCH}_2\text{CHR}^2)_a-\text{O}-$ ,  $-\text{CH}_2(\text{OCH}_2\text{CHR}^2)_b-\text{O}-\text{CO}-$ ,  $-\text{CH}_2\text{O}-(\text{CH}_2)_c-\text{CO}-\text{O}-$ ,  $-\text{CH}_2-\text{CH}_2-\text{O}-$ ,  $-\text{CH}_2-\text{CH}_2-$ ; wherein  $R^1$  is  $-\text{H}$  or a  $\text{C}_1$ - $\text{C}_4$  alkyl;  $R^2$  is  $-\text{H}$  or a  $\text{C}_1$ - $\text{C}_2$  alkyl; a, b are numbers from 0 to 6, preferably from 0 to 2; C is a number from 1 to 3;

$R_h$  is a radical having a polyoxyalkylene structure selected from:

(i)  $-(\text{CH}_2\text{CH}_2\text{O})_q\text{CH}_2\text{CH}_2\text{Z}$ , wherein: q is an integer from 5 to 70, preferably from 6 to 25; Z is selected from  $-\text{OH}$ ,  $\text{C}_1$ - $\text{C}_4$  alkoxy;

- (ii)  $-(\text{CH}_2\text{CH}_2\text{O})_r(\text{CH}_2\text{CH}(\text{CH}_3)\text{O})_s\text{CH}_2\text{CHR}^3\text{Z}$ , wherein  $r+s$  is an integer from 5 to 70, preferably from 10 to 50; the  $r/s$  ratio is in the range 0.1-10, preferably 0.5-5;  $\text{R}^3$  is selected between  $-\text{H}$  and  $-\text{CH}_3$ ;  $\text{Z}$  is selected between  $-\text{OH}$ ,  $\text{C}_1\text{-C}_4$  alkoxy.

Claim 6. (Withdrawn) A formulation according to claim 5, wherein the non ionic surfactants are:

- the compounds of structure (IB) with  $y = 5$ ,  $\text{L} = -\text{CH}_2-\text{CH}_2-\text{O}-$ ,  $\text{R}_h = -(\text{CH}_2\text{CH}_2\text{O})_q\text{CH}_2\text{CH}_2\text{OH}$  wherein  $q = 6$ ;
- the compounds of structure (IIB) having  $\text{R}_f$  of structure (a) with  $\text{T} = \text{C}_3\text{F}_6\text{Cl}$ ,  $m$  and  $n$  such to give a molecular weight in the range 450-650;  $\text{L} = \text{CONH}-$ ;  $\text{R}_h = -(\text{CH}_2\text{CH}_2\text{O})_q\text{CH}_2\text{CH}_2\text{OCH}_3$  wherein  $q=21$ .

Claim 7. (Withdrawn) A formulation according to claim 1, wherein the PTFE is modified with one or more comonomers containing at least one unsaturation of ethylene type in an amount up to 6% molar, preferably up to 1% molar.

Claim 8. (Withdrawn) A formulation according to claim 7, wherein the comonomers are of both hydrogenated and fluorinated type.

Claim 9. (Withdrawn) A formulation according to claim 8, wherein the hydrogenated comonomers are selected from ethylene, propylene, acrylic monomers, styrene monomers.

Claim 10. (Withdrawn) A formulation according to claim 8, wherein the fluorinated comonomers are selected from:

- $\text{C}_3\text{-C}_8$  perfluoroolefins;
- $\text{C}_2\text{-C}_8$  hydrogenated fluoroolefins, such as vinyl fluoride (VF), vinylidene fluoride (VDF), trifluoroethylene, hexafluoroisobutene, perfluoroalkylethylene  $\text{CH}_2 = \text{CH-R}_f$ , wherein  $\text{R}_f$  is a  $\text{C}_1\text{-C}_6$  perfluoroalkyl;
- $\text{C}_2\text{-C}_8$  chloro- and/or bromo- and/or iodo-fluoroolefins;
- $\text{CF}_2=\text{CFOR}_f$  (per)fluoroalkylvinylethers (PAVE), wherein  $\text{R}_f$  is a  $\text{C}_1\text{-C}_6$  (per)fluoroalkyl;

-CF<sub>2</sub>=CFOX (per)fluoro-oxyalkylvinylethers, wherein X is: a C<sub>1</sub>-C<sub>12</sub> alkyl, or a C<sub>1</sub>-C<sub>12</sub> oxyalkyl, or a C<sub>1</sub>-C<sub>12</sub> (per)fluoro-oxyalkyl having one or more ether groups; fluorodioxoles, preferably perfluorodioxoles.

Claim 11. (Withdrawn) A formulation according to claim 10, wherein the fluorinated comonomers are perfluoromethoxydioxole (MDO), perfluoropropylvinylether (PPVE), perfluoromethylvinylether (PMVE) and perfluoropropene (PFP).

Claim 12. (Currently Amended) Dielectric films obtained from a PTFE-based formulation comprising:

- 1) a PTFE latex made of particles whose diameter is in the range of 5 nm to 100 nm, comprising an anionic fluorinated surfactant in an amount in the range of 2% to 25% by weight, based on PTFE;
- 2) a non-ionic fluorinated surfactant added to the PTFE latex in an amount in the range of 18% to 60% by weight, based on the PTFE, wherein  
the dielectric films are obtained from the formulation by depositing according to claim 1, by the deposition of the formulation onto a substrate, then on a substratum, subsequent film sintering the film obtained at a temperature above higher than the PTFE melting T melting point, and then subsequent air-cooling.

Claim 13. (Currently Amended) Dielectric films according to claim 12, wherein the deposition is carried out by spin coating at a spinning rate in the range of 3,000 rpm to 10,000 ~~3,000—10,000~~ rpm for a time comprised between 30 seconds and 5 minutes and in which the sintering temperature is higher than 320°C ~~320°C~~, preferably in the range ~~390°C—410°C~~.

Claim 14. (Currently Amended) Dielectric films according to claim 12 having a thickness lower than 200 nm ~~200 nm~~, preferably in the range ~~50 nm—150 nm~~, a dielectric constant lower than 2.2, a dielectric strength higher than 4 MV/cm and a weight loss at 425°C in the range of 0.0008%/min to 0.02%/min ~~0.0008—0.02%/min~~.

Claim 15. (Currently Amended) A method for the insulation of conductors in integrated circuits comprising utilizing ~~Use of~~ dielectric films according to claim 12 ~~for the insulation of conductors in integrated circuits.~~